Periscope.

With the Assistance of the Following Collaborators:

Chas. Lewis Allen, M.D., Wash., D.C.
J. S. Christison, M.D., Chicago, Ill.
A. Freeman, M.D., New York.
S. E. Jelliffe, M.D., New York.
Wm. C. Krauss, M.D., Buffalo, N.Y.
W. M. Leszynsky, M.D., New York
R. K. Macalester, M.D., N.Y.
J. K. Mitchell, M.D., Phila., Pa
H. Patrick, M.D., Chicago, Ill.
Joseph Sailer, M.D., Phila., Pa.
Henry L. Shively, M.D., N. Y.
A. Sterne, M.D., Indianapolis.

ANATOMY.

55. On the Chrome Silver Impregnation of Formalin-hardened Brain. J. S. Bolton (Lancet, i., 1898, p. 128).

The author has obtained excellent Golgi preparations from specimens fixed in formalin, 5 per cent., for a period of from two to twelve months. His results were less satisfactory if the formalin hardening was less than two weeks. Specimens should be cut preferably one-eighth of an inch thick. After fixation the specimens are transferred to a bath of 1 per cent. ammonium bichromate, where they may remain for from a few hours to five days, after which time the impregnation deteriorates the pictures obtained. Other chromic acid preparations gave less promising results. After the proper time of immersion in the bichromate the pieces are transferred, after rinsing in distilled water, into 1 per cent. silver nitrate, where they remain from sixteen to twenty-four hours. A longer immersion in the silver did not hurt the impregnation. The specimens are then hardened in 60 per cent. alcohol for a few hours, dried and imbedded in melted paraffine without soaking and cut, cleared and mounted in balsam without cover slip. Jelliffe.

56. Beitraege zur Struktur der Nervenzellen und ihre Fortsaetze (Contributions to the Structure of the Nerve Cell). Hans Held (Arch. f. Anat. u. Physiologie, Anatomische Abtheilung, No. 2, 1897, pp. 3, 4).

This is one of the most important contributions to the finer histology of the nerve cell that has thus far appeared.

The author first takes up the question of the significance of what have been termed the "chromophylic" granules. Held has already claimed that these granules, described more particularly by Nissl, were arte-facts due to the fixative solutions used, and in his previous contribution in the same journal, 1895, gave a number of experimental proofs to support his assertion. The present communication is an answer to Lenhossek's criticism of his earlier paper, wherein Lenhossek states that the granules have been observed by him in the fresh specimens. The author adopts the idea that the Nissl granules are brought out by means of acid fixatives, and shows that in spinal cord fixed with weak alkaline solutions (5 to 40 per cent. NaOH was used) the large cells in the anterior horns were completely lacking in these characteristic bodies, and that when he fixed with alcohol (which is nearly always acid) or alcohol plus a small amount of acid, acetic usually being used, the granules were very conspicuous. The author further considers the standpoint of physiological chemistry, which teaches that the reaction of living nervous tissue is alkaline, but that almost immediately after death the reaction becomes acid, sometimes within a few minutes. This development of acid is, in the author's mind, the cause of the formation of the Nissl chromophylic bodies.

The paper further considers the erudite questions of the structure of protoplasm, the nerve cells in particular being the ground debated upon. Held is inclined to adopt the reticulum theory, somewhat modified from the original Fromann point of view, and rejects the filar theory of Fleming. The article is one that cannot be omitted from the range of the neurologist's reading if he is interested in the problems of structure and the interpretation of microscopical pictures.

JELLIFFE.

57. UEBER VARIATIONEN IM VERLAUFE DER PYRAMIDENBAHN (On Variations in the Course of the Pyramidal Tract). A. Hoche (Neurolog. Centralblatt, 16, 1897, No. 21).

The author contributes to this subject the anatomical findings in a case of glio-sarcoma, situated in the central convolutions, causing descending degeneration, in the pyramidal tract; the course of the latter was found to vary from that usually observed. Examination by Marchi's method showed that in the peduncle, pons and medulla the region of the left pyramid was exclusively degenerated.

The decussation occurred at the normal level, but a portion of the fibres passed down into the opposite anterior tract.

This decussated anterior tract extended throughout the entire cervical region of the cord, and disappeared at the level of the first dorsal root.

Another unusual occurrence was the extension forward of the area of degeneration beyond the ordinary region of the lateral pyramidal tract, which normally does not reach beyond a line drawn through the lateral horns.

At the II. cervical in Gower's tract a bundle was observed, which showed itself throughout the cervical cord as an irregular figure.

Throughout the dorsal cord the crossed pyramidal tract extended also too far forward, and even in the lumbar region the pyramidal area was greater than usual.

The direct pyramidal tract showed a hook-like formation as low down as the dorsal region.

MEIROWITZ.

58. ON THE ENDOGENOUS OR INTRINSIC FIBRES IN THE LUMBO-SACRAL REGION OF THE CORD. A. Bruce (Brain, 20, 1897, p. 261).

The author discusses the fibres found in the posterior columns of the cord in the lumbo-sacral region, termed by Marie the endogenous fibres. These fibres form two very well-marked tracts, one lying in the anterior part of the posterior column, in close opposition to the posterior cornu, commissure and septum; the second in immediate relationship to the posterior median septum, and in part to the posterior surface of the cord. The first tract, the *cornu-commissural tract* (Hinterstrangsfeld); the second, termed by the author the *septo-marginal tract*, "Edinger's medianisches Hinterstrangsfeld."

These fibres do not degenerate upward according to the author, being spared in locomotor ataxia; but they do suffer degeneration in conditions which induce degeneration in the cells of the posterior horns.

1.) The *cornu-commissural tract* extends through the whole of the lumbo-sacral region, being traceable from the lowest dorsal segments